



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/501,169

07/12/2004

Siebe Tjerk De Zwart

NL020016

5392

24737

7590

01/18/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

DONG, DALEI

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 01/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/501,169

Applicant(s)

DE ZWART ET AL.

Examiner

Dalei Dong

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The Amendment filed on November 16, 2005, has been entered acknowledged by the Examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-9 and 11-20 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,677,709 to Ma.

Regarding to claim 1, Ma discloses in Figures 1-3 and 9, a display device comprising: a first (120) and a second (170) set of electrodes, and a plurality of light-emitting elements (130), arranged between the sets of electrodes and being in electrical contact with the first set of electrodes (120), characterized by an electromechanically operable foil (180) having at least one electrically conducting side (190) that is substantially unpatterned, the foil (combination of elements 180 and 190) being located between the light-emitting elements (130) and the second set of electrodes (170), with the conducting side (190) facing the light-emitting elements (130), and the foil (combination of elements 180 and 190) being arranged to place the conducting side (190) in contact

with selected one of the light-emitting elements (130), thereby closing a circuit from the first set of electrodes (120), via the elements (130), to the conductive side (190) (see column 5, lines 29-53).

Regarding to claim 2, Ma discloses in Figures 1-3 and 9, the foil (180) is made of an electrically conducting material (see column 4, line 60 to column 5, line 3).

Regarding to claim 3, Ma discloses in Figures 1-3, and 9, the foil (combination of elements 180 and 190) has one side coated with an electrically conducting layer (190).

Regarding to claim 4, Ma discloses in Figures 1-3 and 9, the foil (combination of elements 180 and 190) is displaceable towards electrically activated electrodes in the second set of electrodes (170, when the foil move back to its original position), thereby moving the conducting side (190) away from the light-emitting element (130) (see column 5, lines 15-23).

Regarding to claim 5, Ma discloses in Figures 1-3 and 9, the foil (combination of elements 180 and 190) is displaceable towards electrically activated electrodes in the first set of electrodes (120), thereby forcing the conducting side against the light-emitting elements (130) (see column 5, lines 13-53).

Regarding to claim 6, Ma discloses in Figures 1-3 and 9, the foil (combination of elements 180 and 190) is arranged to be forced against the light-emitting element (130) except when attracted towards electrically activated electrodes in the second set of electrodes (170) (see column 5, lines 13-53).

Regarding to claim 7, Ma discloses in Figures 1-3 and 9, the first set of electrodes (120) comprises a first plurality of parallel strip electrodes (by forming the matrix shown in Figure 9), and the second set of electrodes (170) comprises a second plurality of parallel strip electrodes, in orthogonal relationship with the first plurality of electrodes (the overhang or movable part over the light-emitting element of the electrode 170), so that the sets of electrode form a grid of interesting electrodes, and wherein the light-emitting elements (130) are located at intersections of electrodes (shown in Figure 2).

Regarding to claim 8, Ma discloses in Figures 1-3 and 9, the conducting side (190) is connected to ground (see column 5, lines 41-53).

Regarding to claim 9, Ma discloses in Figures 1-3 and 9, the light-emitting elements (130) are organic electroluminescent devices, such as OLEDs or PolyLEDs (see column 3, lines 15-33).

Regarding to claim 11, Ma discloses in Figures 1-3 and 9, a display device comprising: a plurality of first electrodes (120), a plurality of second electrodes (170), a

plurality of light-emitting elements (130) that are operably coupled to the plurality of first electrodes (120), a foil (180) that includes an electrically conductive layer (190) that is configured to provide selective contact to select elements of the plurality of light emitting elements (130), wherein the selective contract is determined based on a potential difference between the foil (180) and select electrodes of the plurality of second electrodes (170) (see column 5, lines 29-42).

Regarding to claim 12, Ma discloses in Figures 1-3 and 9, the light emitting element (130) include organic electroluminescent devices.

Regarding to claim 13, Ma discloses in Figures 1-3 and 9, the light emitting elements includes light emitting diodes.

Regarding to claim 14, Ma discloses in Figures 1-3 and 9, the foil (180) is configured to be in contact with the light-emitting elements (130) in the absence of a potential difference between the conductive layer (190) of the foil and the plurality of first electrodes (120).

Regarding to claim 15, Ma discloses in Figures 1-3 and 9, the second electrodes (170) correspond to row select electrodes, and the first electrodes (120) correspond to data electrodes.

Regarding to claim 16, Ma discloses in Figures 1-3 and 9, the data electrodes are driven by pulse-width modulated signals.

Regarding to claim 17, Ma discloses in Figures 1-3 and 9, the conductive layer of the foil is maintained at a substantially constant potential.

Regarding to claim 18, Ma discloses in Figures 1-3 and 9, the plurality of first electrodes (120) are arranged substantially orthogonal to the plurality of second electrodes (170).

Regarding to claim 19, Ma discloses in Figures 1-3 and 9, the foil is substantially unpatterned.

Regarding to claim 20, Ma discloses in Figures 1-3 and 9, the foil includes an evaporable polymer (see column 4, lines 60-65).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,677,709 to Ma in view of U.S. Patent No. 6,037,719 to Yap.

Regarding to claim 10, Ma discloses in Figures 1-3 and 9, a display device comprising: a first (120) and a second (170) set of electrodes, and a plurality of light-emitting elements (130), arranged between the sets of electrodes and being in electrical contact with the first set of electrodes (120), characterized by an electromechanically operable foil (180) having at least one electrically conducting side (190), the foil (180) being located between the light-emitting elements (130) and the second set of electrodes (170), with the conducting side (190) facing the light-emitting elements (130), and the foil (6) being arranged to place the conducting side (190) in contact with selected one of the light-emitting elements (130), thereby closing a circuit from the first set of electrodes (120), via the elements (130), to the conductive side (190).

However, Ma does not specifically disclose the light-emitting elements are non-organic LEDS.

Yap teaches in Figures 1-4, a display device comprising: a light-emitting element that is non-organic LED (see column 2, lines 46-56) for the purpose of reducing the cost of the display device.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilize the non-organic LED of Yap for the light-emitting element of the display device of Ma in order to reduce the cost of the display device.

Response to Arguments

6. Applicant's arguments filed November 16, 2005 have been fully considered but they are not persuasive.

In response to Applicant's argument that the Ma reference fails to teach or suggest an unpatterned foil that makes contact with select light-emitting elements. The Examiner asserts that the first conductive metal layer 170 may be patterned to allow for individual element actuation, however the actuating member 180 is substantially unpatterned. As shown in Figures 1-3, the foil or actuating member 180 of the Ma reference is merely a flat sheet and it is substantially unpatterned. Thus, the Examiner asserts that the Ma reference teaches an unpatterned foil that makes contact with select light-emitting elements and maintains the rejection.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

Art Unit: 2879

advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (571)272-2370. The examiner can normally be reached on 8 A.M. to 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571)272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



D.D.

January 11, 2006



Joseph Williams
Primary Examiner
Art Unit 2879